

KNOWLEDGE

VOL. 2 / MAR 2012

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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TREATING BITES AND STINGS



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KNOWLEDGE

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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U.S. ARMY COMBAT READINESS/SAFETY CENTER

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Mission statement: USACRC supports our Army at war by collecting, storing, analyzing, and disseminating actionable information to assist Leaders, Soldiers, Families, and Civilians in preserving/protecting our Army's combat resources.

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Knowledge is published monthly by the U.S. Army Combat Readiness Center, Bldg. 4905, 5th Ave., Fort Rucker, AL 36362-5563. Address questions regarding content to the editor at (334)255-2688. To submit an article for publication, e-mail knowledge@csrc.army.mil or fax (334)255-9204. We reserve the right to edit all manuscripts. Address questions concerning distribution to (334)255-2662. Visit our Web site at <https://csrc.army.mil>. Information in Knowledge is not necessarily

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WHAT ABOUT YOUR "3 TO

Our Army recruits and retains many generations of high-quality men and women. These Soldiers are instilled with integrity, personal courage and a commitment to our great Nation that is more than admirable – it is the foundation of our volunteer force protecting freedom.

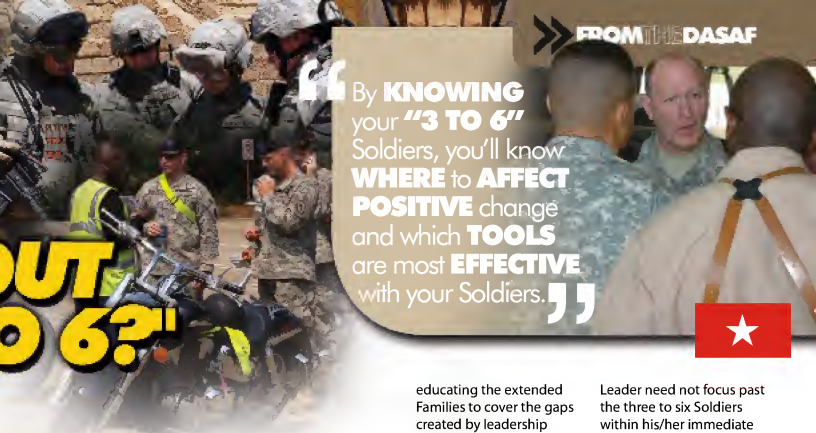
When I ponder the million-man force that is the Army today, I am convinced that 99 percent of Soldiers ultimately want to do the right thing. Furthermore, I'm convinced that Soldiers do not wake up one day and ask themselves, "What can I mess up today?" With that said, how do we convince Soldiers to cross the fine line of wanting to do right and actually doing so?

Our Soldiers deploy throughout the world and make safety decisions during missions and on the battlefield that save lives. In fact, statistics confirm that fewer accidents occur in deployed locations versus home stations and off duty.

What does this tell us?

It tells us that the same Soldiers who are making the right decisions to prevent accidents while deployed are then coming home and making decisions that lead to accidents. The high safety awareness established while deployed is not returning with our Soldiers.

I believe we can effectively categorize the majority of accidents with one or more of the following contributing factors. You have heard them before and there is absolutely nothing unique in these. However, about 90 percent of every accident investigation report we execute, review and receive includes



“By **KNOWING** your **“3 TO 6”** Soldiers, you’ll know **WHERE** to **AFFECT POSITIVE** change and which **TOOLS** are most **EFFECTIVE** with your Soldiers.”



one of the following contributing factors:

- **Complacency**
- **Overconfidence**
- **Untrained**
- **Indiscipline**

Is there magic in eliminating these contributing factors? Might there be an elimination of accidents through the elimination of these four factors? Perhaps not a 100-percent reduction but certainly a significant step in the right direction.

As Leaders, I’m certain you have undoubtedly asked yourselves these questions numerous times.

1. How do I, as a Leader, set the conditions for success in my formations?

2. How do I allow Soldiers to operate outside the immediate vicinity of my reach and do so successfully?

There is not one solution set or a single

answer “how to,” but I contend there exists numerous tools that afford Soldiers situational awareness. For starters, we know accountable Leaders, engaged at the proper echelon with every Comrade, immediately save lives. They promote change in our Soldier’s culture, instinct and intuition for our future. But where is that engagement when those Leaders are not physically present?

The Family? Seems the one person who provides input to Soldiers up until and way past their early years in life resides in the Family. Soldiers listen to these Family members when it comes to decisions, behaviors and actions. Some say besides the spouse, there is no one who exhibits influence on a Soldier’s life more consistently than the Soldier’s mother. Is there value in engaging and

educating the extended Families to cover the gaps created by leadership absences during times such as block leave, NCO education and changes of command?

So how do we successfully engage the entire formation in various environments? Seems the answer is simple: “3 to 6.” The “3 to 6” principle is a viable and uncomplicated solution that (USACRC) Command Sgt. Maj. Tod Glidewell and I endorse. This unspoken principle proposes every Leader is best effective in the leadership role when they are responsible for three to six Soldiers. How well do you know your “3 to 6”? Check the December 2007 issue of *Knowledge* at <https://crc.army.mil/Knowledge>, “Making a Difference with Engaged Leaders” to see how your leadership measures up. In the article, Command Sgt. Maj. Glidewell relates a story a wise sage passed along to him, that every

Leader need not focus past the three to six Soldiers within his/her immediate sphere of concern. That a Leader at squad level has three to six within that squad; a platoon sergeant has three to six in that platoon; and a company first sergeant has three to six in that company. By knowing your “3 to 6” Soldiers, you’ll know where to affect positive change and which tools are most effective with your Soldiers. Our Army operates on this concept and it works.

Needless to say, you as Leaders have difficult tasks to perform and the challenges you face are daunting, but there are tools that benefit you and your formations. Engage and achieve success. Engage and get to know your “3 to 6.” Thanks and remember, an Army Safe is Army Strong! «

William H. Forrester
Brigadier General, USA
Commanding

“The **BEST** driver's training programs **INCORPORATE** on- and off-duty driving in **ALL TYPES** of **WEATHER** and **VISIBILITY.**”



DRIVER'S TRAINING ENABLES SOLDIERS TO MAKE SMART DECISIONS

During the course of my career, driving in our Army has often been viewed as a routine task. Nothing could be further from the truth, especially today, as we fall in on and operate equipment we have never seen before.

As Brig. Gen. Forrester alluded to in his column this month, we suffered significant losses in our ranks during the month of February to on- and off-duty accidents. Some of these accidents included vehicle rollovers, vehicle ejections and head-on collisions.

As Soldiers, we have the opportunity to participate in driver's training programs that are offered at many of our military installations. While most of these programs are geared toward our Soldiers operating a military vehicle in a tactical environment, complete with full battle rattle, the emphasis of the training is teaching Soldiers to make smart decisions behind the wheel to avoid an accident.

One way to aid in the fight against these type incidents is to conduct POV check rides and continue driver's training at your installation after you return. A common trend in many communities across our Nation is the availability of defensive driving training courses. For the motorcyclist, the Motorcycle Safety Foundation® courses are provided at most installations by IMCOM. These courses, usually taught by certified contractors that use a standardized

program of instruction, have one objective in mind – saving lives.

A best practice I witnessed during a recent visit to an installation was a remedial driver's training program. Those individuals who had been cited for violations in which they had lost their post driving privileges were required to attend the class prior to reinstatement. The eight-hour class is taught on a Saturday and requires participants to show up in a Class A uniform with their first-line supervisor. At the end of the class, the Soldiers have to pass a written exam. It's a simple, yet effective, use of corrective training that worked for this installation.

Tactical driving can be another story. For example, we currently have those that have never driven to those that have logged thousands of miles in combat conditions. For that reason, it is best to start driver's training early in the reset period in a controlled environment, not combat. I know of no better way to engage our young Soldiers than for noncommissioned officers to mentor them on the "do's and don'ts" of operating vehicles such as the HMMWV. The best driver's training programs incorporate on- and off-duty driving in all types of

weather and visibility. They then move on to more advanced tasks such as driving with night vision devices, load planning and security of loads.

Many installations have moved toward a driving center of excellence. Fort Polk and ARCENT in Kuwait have done so in tactical driving. Fort Drum has taken it one step further with its driver's training program. Set in a real-world environment, the program combines both POV and tactical training in a one-stop building. Fort Drum also is working to partner with the state of New York to teach driver's education on post. The program will focus primarily on Soldiers, but it may also be made available to Families.

To expand the program your post offers, check into ways to work with your local and state enforcement agencies. Also check out what we have to offer here at the U.S. Army Combat Readiness/Safety Center via our Web site at www.crc.army.mil. Our Driver's Training Toolbox has the resources to either get you started or enhance the program you currently have in place at www.crc.army.mil/drivertrainingtoolbox/lessonone.aspx.

Keep moving left of the boom on accidents and thanks for all you do in making us Army Safe and Army Strong! ❧

Tod L. Glidewell

Tod L. Glidewell
Command Sergeant Major
U.S. Army Combat Readiness/Safety Center

The spring and summer seasons are around the corner and with them comes the proverbial severe weather. It is imperative all crewmembers are familiar with the inherent dangers of severe weather.

WEATHERING the CHANGE

LOU STRAW
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Often called nature's heat engine, thunderstorms are born from cumulus clouds that grow into towering cumulus and, ultimately, reach adulthood as cumulonimbus. While thunderstorms can occur any time during the year, they most often occur in the late afternoon to early evening on hot summer days. They can form by themselves (single cell, supercell or air

mass) or in clusters (frontal, squall lines or mesoscale convective complexes). Thunderstorms harness energy equal to—and often greater than—the energy released by an atomic bomb.

Turbulence

Turbulence is the greatest meteorological danger to aviation. It is caused by the tremendous updraft and downdraft winds within

“Thunderstorms harness TO—and often GREAT RELEASED by an ATO

the thunderstorm. The most severe turbulence is between 8,000 and 15,000 feet above ground level (AGL) within the updraft. Updraft winds can be greater than 65 feet per second. Downdraft winds can also produce turbulence, but they are usually less severe and occur below 10,000 feet AGL. Downdrafts have been known to slam a plane into the ground while landing.

Icing

Icing is another significant hazard associated with thunderstorms. It can occur during all three stages of a thunderstorm—the cumulus or developing stage, the mature stage and the dissipating stage. Icing generally occurs in the mature and dissipating stages—the middle levels of the thunderstorms where the temperatures are between zero and minus 15 C. Super-cooled water that exists at below-freezing temperatures will freeze on contact with an aircraft. Clear icing can quickly become extremely hazardous.

Hail

Hail is regarded as one of the worst hazards of thunderstorm flying. It's usually found between 10,000 and 15,000 feet AGL, with the greatest frequency of hail at the mature stage. Hail can produce serious structural damage to an aircraft in just a few seconds. It can be found as far as five miles outside and ahead of an advancing thunderstorm.

Microbursts

Microbursts are yet another hazard well known for bringing down airplanes sooner than expected. They are small-scale, intense downdrafts that, upon reaching the surface, spread outward in all directions. The greatest threat from a downdraft

often occurs in the front or leading edge of a thunderstorm. Because of their small size (less than one to two and a half miles) and their short life span (usually less than 15 minutes), downdrafts most often occur over areas without surface precipitation.

Microbursts are not easily detectable using conventional weather radar or wind-shear alert systems. The intensity of the downdraft can reach 100 feet per second. Horizontal winds near the surface can be as strong as 45 knots, resulting in a 90-knot shear (headwind to tailwind change for a traversing aircraft) across the microburst. A major consideration for pilots is that a microburst will intensify for about five minutes after it strikes the ground.

Lightning

Lightning causes around 100 deaths in the United States annually.

Lightning can damage not only the skin of an aircraft, but also the electronic components. Lightning generally occurs within 5,000 feet of the freezing level, in light precipitation or light to negligible turbulence. Lightning “crawlers” can travel more than 35 miles along the clouds and have been observed out to 75 miles on radar. It can be a beautiful, but dangerous, light show!

Tornados

Tornados are nature's most violent storms. Although tornados will happen year 'round, the spring (March through May) and, to a lesser extent, the fall (November) are the peak seasons in the United States. Spawned from powerful



ENERGY EQUAL OR MORE THAN—the energy OF A NUCLEAR BOMB. ” ”

thunderstorms, tornados can cause fatalities and devastate a neighborhood in seconds. A tornado appears as a rotating, funnel-shaped cloud that extends from a thunderstorm to the ground with whirling winds that can reach 300 miles per hour. Damage paths can be in excess of one mile wide and 50 miles long. Most tornados travel from southwest to northeast and occur during the afternoon timeframe, coinciding with the maximum heating of the day. When tornado watches or warnings are issued for the area, take immediate safeguards.

Hurricanes

Among the many summertime phenomena of significance are

hurricanes. Hurricane season for the Atlantic and Gulf of Mexico runs from June 1 through Nov. 30. Hurricanes develop as a tropical wave and mature into hurricanes over a period of days. Warm surface waters and a lack of shear in the upper levels of the atmosphere aid in the development of hurricanes. The storm surge is the most dangerous part of the storm.

Storm surge is a great dome

of water often 50 miles wide or greater that sweeps across the coastline ahead and east of the eye of the hurricane. Hurricanes will also spawn tornados, most often found in the right-front quadrant (ahead and to the east of the eye) of the storm, roughly 50 to 300 miles from the center.

Much of the same weather you find here in the United States can



DID YOU KNOW?

- At any given time, there are an estimated 2,000 thunderstorms in progress.
- About 45,000 thunderstorms take place each day.
- Annually, the United States experiences about 100,000 thunderstorms.
- About 16 million thunderstorms occur annually around the world.
- The average thunderstorm lasts 30 minutes.
- Lightning from these storms strikes Earth about 100 times each second.

be found in theater. Convection and rainfall tend to fall off during the summer months, thus making it much drier in these regions. Additional features that affect the Middle East are the Shamal, found over Iraq and the Arabian Peninsula, and the Seistan — or “Winds of 120 Days” — over Eastern Iran and the “Stans” region. These are areas of significant winds and blowing dust and/or sand events. These strong, northwesterly wind events sweep across the region beginning in May and last throughout the summer months. They develop when strong cold fronts pass over the mountains of Turkey and Kurdistan and the leading edge of a mass of relatively cooler air kicks up dust and sand, sending it aloft. The duration of Shamals or Seistans is normally three to five days. Since the resultant dust and sandstorm is several thousand feet deep, travel by air and

ground comes to a standstill. Sustained winds during these events are normally 20 to 35 knots with higher gusts likely. Visibilities will be reduced to zero or near zero for much of the event. Temperatures at lower elevations still hover above 105 F (42 C) during these events.

Hot, Hot, Hot!

Another feature in the summer that affects aircrews and aircraft is the heat. Excessive temperatures can lead to many heat injuries such as heat cramps, heat exhaustion and heat or sun stroke. It is crucial you recognize the signs of heat disorders.

HEAT INDEX SCALE

<i>Heat Index</i>	<i>Effects</i>
80 F - 90 F	Fatigue possible
90 F - 105 F	Sun stroke, heat cramps and heat exhaustion possible
105 F - 130 F	Sun stroke, heat cramps or heat exhaustion likely
130 F or higher	Heat stroke/sun stroke highly likely





Heavy sweating and painful muscle spasms in the legs and stomach are signs of heat cramps. To alleviate this, apply firm pressure on cramping muscles and massage to relieve spasms. Take small sips of water. With heat exhaustion, you may experience heavy sweating; weakness; cold, pale and clammy skin; and a thready pulse, along with fainting and vomiting. To lessen the effects, get out of the sun and into an air-conditioned or fanned room. Lie down and loosen clothing, apply cool wet cloths and take sips of water. Heat or sun stroke is the most critical of all. Signs of a heat stroke are high body temperature

(106 F or higher); hot, dry skin; rapid or strong pulse; and, possibly, unconsciousness. If any of these symptoms are apparent, call for emergency help immediately. Move the victim to a cooler environment, remove his clothing and give a cold bath or use cold sponges or towels. Do NOT give fluids.

Preventive measures will help in avoiding a heat-related incident. Drink plenty of water to keep yourself hydrated. Alcohol and caffeine will only serve to dehydrate the body. Dress in lightweight, light-colored clothing. If at all feasible,

avoid sun exposure during the heat of the day and stay indoors as much as possible. Always stay alert to possible heat disorders.

Density Altitude

Lastly, we will look at density altitude (DA) and its effects on aviators during the summer heat. Density altitude is defined as the pressure altitude corrected for temperature deviations from the standard atmosphere. Changes in air density are caused by variations in atmospheric pressure, temperature and humidity. The lift of an aircraft wing or blade is affected by the speed of the air around it and the density of the air through which it moves. Lift will be increased by cold, dense air. Both an increase in temperature and increase in humidity cause a reduction in air density. Thus, in hot and humid conditions, the DA at a particular location might be significantly higher than the geometric altitude. Too often, pilots associate DA only with high-elevation airports. Certainly, the effects of DA on airplane performance are increasingly dramatic in operations from such airports, especially when the temperature is also hot. But it is important to remember DA altitude also has a negative effect on performance at low-elevation airports when the temperature goes above the standard air value of 15 C at sea level. Remember also that the standard air temperature value decreases with altitude.

Conclusion

There are many spring and summer hazards to be concerned with. Taking preventive measures and being fully aware of the operational weather is vital to mitigating some of these hazards. The first step in preparedness is establishing a severe-weather action plan for home, work, school and outdoors. Always respect the weather. «

ADDITIONAL FEATURES that **AFFECT** the Middle East are the **SHAMAL**, found over Iraq and the Arabian Peninsula, and the **SEISTAN** — or **'WINDS OF 120 DAYS'** — over Eastern Iran and the 'Siars' region. »

Battling the Bite

SGT. CHARLES BATEMAN
61st Medical Detachment (Preventive Medicine)
Fort Campbell, Ky.

As the temperature outside continues to rise, more insects—including mosquitoes and sand flies—have started to emerge, causing an increased workload for Soldiers of the 61st Medical Detachment, Preventive Medicine. One of the detachment's responsibilities is to monitor vector populations and initiate appropriate control measures once predetermined thresholds are reached. Populations of concern include *Anopheles* mosquitoes, which can transmit malaria, and sand flies, which can transmit leishmaniasis.

The 61st Medical Detachment accomplishes this mission by setting out 40 Centers for Disease Control mosquito light traps twice a week at different sites throughout the Victory Base Complex (VBC) in Baghdad, Iraq. These traps use a light

source to attract mosquitoes and sand flies and suck them into a netted cup for collection. The traps are set out in the afternoon and collected the following day.

Catches are brought back to the lab, where the mosquitoes and sand flies are separated and identified. Additionally, Kellogg, Brown and Root (KBR) Vector Control

are collected weekly for identification by the 61st Medical Detachment. All mosquitoes and sand flies collected in the light traps and the mosquitoes from the Mosquito Magnets® are sent to the U.S. Army Center for Health Promotion and Preventive Medicine (Europe) for analysis.

Population data suggest



DID YOU KNOW?

In Iraq, sand fly season runs from April through November, peaking in September or October. While effective treatment is available, prevention remains the best option.

contractors operate traps called Mosquito Magnets®. The traps burn propane to produce carbon dioxide, which attracts bloodsucking insects. The magnets run continuously throughout the VBC, and captured insects

that mosquito levels on the VBC will peak between the months of April and June, while sand fly population levels will peak between June and October. The 61st Medical Detachment has received numerous complaints from



Soldiers and civilians about these insects. Fortunately, they can protect themselves from mosquitoes and sand flies by using the Department of Defense (DOD) arthropod repellent system. First, the uniform should be worn with sleeves down

and pant legs bloused inside the boots. Second, uniform and bed nets should be treated with permethrin using an IDA kit or the infamous yellow can. Lastly, the insect repellent DEET should be applied to all exposed skin, to include the hands, neck and face. The lotion should be reapplied frequently to those who sweat a lot.

Another good idea is to ensure breeding habitats are

removed from the area by picking up trash, eliminating stagnant water, cutting down excessive brush and removing old sandbags where sand flies live. By taking these small preventive measures, the chances of contracting diseases such as malaria and leishmaniasis will be significantly reduced. Help yourself and your buddy by remaining fit to fight. ■



For more information on leishmaniasis and other insect-borne diseases, visit the U.S. Army Center for Health Promotion and Preventive Medicine Web site at <http://chppm-www.apgea.army.mil/> and check under the Diseases of Interest heading.

THIS BITES

The best way to prevent leishmaniasis is to prevent sand fly bites. There are no vaccines or pills to prevent it. To decrease the risk of being bitten, Soldiers should:

- Stay in air-conditioned tents from dusk to dawn when possible.
- Stay in well-screened tents if air-conditioned tents are not available.
- Wear long-sleeved shirts, long pants and socks when going outside. Tuck undershirts into pants and pants into boots.
- Apply insect repellent liberally on uncovered skin and under the ends of sleeves and pant legs. The military controlled-release lotion containing 33 percent DEET is effective for four to 12 hours. Repeat as directed.

■ Treat clothing with permethrin-containing insecticides. The military IDA kit treats one uniform and lasts through approximately 50 washings. Uniforms treated with permethrin in an aerosol spray can must be retreated every five to six washings.

■ If sleeping in an area without air-conditioned tents or proper screens, use a fine mesh bed net (at least 18 holes per inch) and tuck it under the mattress. The bed net should be soaked or sprayed with permethrin because sand flies are small enough to pass through even fine mesh bed nets.

■ Avoid dogs or rodents near sleeping areas.

Source: Deployment Health Clinical Center





After the Ouch: **TREATING** **BITES** and **STINGS**

Whether in a stateside maneuver area or in theater overseas, Soldiers occasionally come into contact with insects and animals that sting or bite. The treatment a Soldier receives after a painful encounter with wildlife is critical, so it's important to know the proper guidance for treating these injuries.

Be it wolverine or wild dog, if an animal in the wild bites a Soldier, it should be killed and sent with the victim to the nearest medical facility. Laboratory testing of the animal's head will reveal what sort of diseases it could have passed on to the unlucky Soldier. So, if possible, kill the animal, then immediately treat the troop. There is no time to waste in this process.

First, wash the wound with soap and water for 20 minutes, and then cover the punctured skin with sterile gauze. If the injury is to an arm or leg, bind the appendage with either a sling (for the arm) or a splint (for the leg). It is important to immobilize the extremity as a precaution against further injury. Finally, move the victim to the nearest medical unit for proper treatment.

This technique serves well

with most animal bites. However, procedures differ by degree when it comes to more common types of bites and stings. A bee sting, for example, is a familiar threat to just about anyone who has ever enjoyed a family picnic or a walk in the woods. But bees can also harm Soldiers. And when they do, Soldiers should be prepared.

If a Soldier has been stung, carefully remove the stinger by gently scraping it with a firm, hard-edged implement such as the edge of a knife or even a finger nail. Be careful not to squeeze the venom sack attached to the stinger, as this may inject more venom into the victim. Once the stinger is removed, wash the area with soap and water. If possible, apply either ice or a chemical freeze pack to the wound. When treating a Soldier who is allergic

to bee venom, try to find an emergency allergic reaction kit. Also, be prepared to perform cardiopulmonary resuscitation in case the victim is overcome by the symptoms. Above all, seek medical assistance immediately.

It may surprise some to know that ant and tarantula bites and scorpion stings have similar treatment schemes. Ants and tarantulas possess a relatively mild venom, if any. Scorpion venom, however, could range from mild to highly toxic, depending on the species. Caregivers who suspect a person has received a dose of highly toxic venom should attempt to calm the victim. In addition to reassuring the victim, this effort will prevent a rapid heartbeat, thereby diminishing exposure of victim's tissue to the toxin. This method of first aid applies no

INGS

1ST LT. ERIK JOHNSON
Indiana Army National Guard

matter the source of deadly toxin.

Thankfully, with the exception of rare species of scorpions, these three animals are not known to carry deadly toxins. However, that doesn't mean aggressive treatment shouldn't be given to the victim. Delaying treatment for even a mild toxin could risk some permanent injury to the Soldier. So, first, wash the affected area with soap and water, and then

as for other bites and stings; however, the consequences of delaying expert medical care are considerably greater. First, calm the Soldier. Next, wash the area of the bite with soap and water and apply an ice pack, if available. Most importantly, rush the victim to medical support. Without expert medical treatment, a victim of either one of these spiders may suffer permanent injury to the muscles and skin in and around the area of the bite.

Although any of the above injuries can be painful and dangerous, they're typically not life threatening. Of course, we haven't discussed snakes yet.

A Soldier bitten by a poisonous snake is in dire need of medical treatment but will initially need first aid. To begin, immediately remove the injured Soldier from the vicinity of the snake. Then remove any rings from the Soldier's fingers; this is to prevent any additional injury due to swelling. Remember, the victim has been poisoned, so it's

important to inhibit the flow of poison into the vital organs. Talk to the victim reassuringly to quiet and comfort him, but more needs to be

done to inhibit the toxins in the snake's venom from entering the Soldier's bloodstream.

If bitten somewhere on the torso, the Soldier is even more vulnerable than if the bite had been to a limb, so get immediate medical attention. Should the bite occur to a limb, use a strip of uniform cloth or medical gauze to apply a constricting band between the wound and the Soldier's heart. The constriction should be

just tight enough to allow one finger to slip between the band and skin without difficulty. The distance of the band from the bite should be about the width of two fingers placed side by side.

For bites to the hands or feet, just one constriction will do; however, for bites to the arms or legs, use two. One constriction will be placed above the wound to restrict the flow of poison to the heart and internal organs; the other will be placed below the wound to restrict flow to the hands or feet, where damage to the musculature could be seriously debilitating. Again, bind the affected limb so it remains fixed and unable to move. If possible, kill the snake without damaging its head and transport it along with the victim to a medical treatment facility.

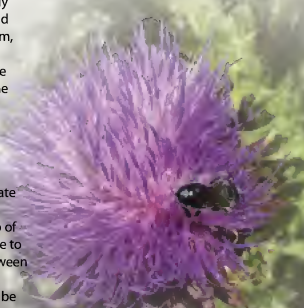
Bites and stings can be painful occurrences, but a little knowledge about how to treat these injuries will greatly benefit the victim. Never try to suck the poison from a wound. It won't do the victim much good and could cause the caregiver great harm. Instead, focus on getting the victim to medical help as quickly as possible. Remember, forewarned is forearmed. Stay safe. <<



For more information on some biting and stinging creatures found in theater, see the Arachnids of Iraq and Kuwait poster on the U.S. Army Center for Health Promotion and Preventive Medicine Web site at <http://chppm-www.apgea.army.mil/DEPLOYMENT/ARACHNIDSOFIRAQANDKUWAIT.PDF>

apply ice or a freeze pack. Baking soda or calamine lotion applied to the wound will help relieve pain and itching. And, as always, the most important step in treating the victim of an animal bite or sting is to quickly get the person to professional medical help.

It shouldn't come as a surprise that the black widow and brown recluse spiders both have highly toxic venom. First aid will follow much the same routine



Every year, we have Soldiers die from heat-related injuries because they don't take the necessary precautions to prevent heat injuries.

COL. JOHN CAMPBELL, D.O.
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

THINGS ARE HEATING

Heat casualties represent a serious threat to the medical readiness and fitness of our military personnel both in garrison and during deployments. Each year, the Army records hundreds of cases of heat-related injuries, including some that take the lives of Soldiers. These injuries often result from individual physical training (PT), PT testing, training exercises and other activities, including those recreational in nature.

The U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) provides guidance and has information, along with numerous posters, readily available on its Web site at <http://chppm-www.apgea.army.mil/heat/>. Check out the Heat Injury Prevention Policy (DASG-PPM dated April 20, 2007), which includes Web sites for obtaining training videos, posters and guidance for heat injury prevention.

Additionally, USACHPPM and the U.S. Army Research Institute for Environmental Medicine have developed valuable heat-injury prevention products, including useful posters, videos and pocket

guides. These are also available on the USACHPPM Web site. Use them before someone in your formation has a heat injury.

Leaders must be held accountable for the training and actions of their Soldiers. Leaders should incorporate the composite risk management (CRM) model into every training event and account for the worst-case scenario of Soldiers not drinking water. Some trainees don't know when to refill their canteens, some are unable to find water points during land navigation events and some Soldiers are forced to either get water or "gut it out" to

the next event. All these issues happened during fiscal 2007. In the units involved, the needed policies and command involvement were nonexistent. This needs to improve. The U.S. Army Combat Readiness/Safety Center (USACRC) publishes these occurrences in our preliminary loss reports.

All cases of heat injuries must be reported to the USACRC and the medical community. The more we know about these heat injuries, the better we can establish preventive guidance and training. All cases of heat stroke and heat exhaustion must be reported to the

THINGS TO REMEMBER

- Heat-related illness can be prevented.
- Keep cool; avoid vigorous physical activity in hot weather and drink plenty of water and other nonalcoholic fluids.
- Seek medical assistance if a person shows any signs of heat exhaustion or heat stroke.
- At all times, notify supervisors of any incidents of heat-related illness.





PEEING WHITE, READY TO FIGHT!

COL. JOSEPH E. MCKEON
Aeromedical Propensity Directorate
Fort Rucker, Ala.

Staying alive is serious business when you're a Soldier. Although we're an Army at war battling a deadly enemy overseas, there is another enemy stalking us everywhere from the front line to the front yard. That enemy is summer heat.

You say, "Okay, here we go again ... another article on heat injury prevention. Is it almost summertime already?" Time flies, whether you're doing 20 years or just getting through your initial obligation. Any way you look at it, it's going to get hot. And heat kills, literally. It claims batteries, paint jobs, unwatered plants, dogs left in cars and unacclimatized Soldiers. Heat is just plain unforgiving.

Here's the deal. Whether you're in the sandbox, training back at home station or enjoying the sunny climate of Fort Irwin, Calif., you'll be facing a heat threat. When you're packing your full battle rattle with your sleeves down and your gloves on, you're a walking teapot. As your body sweats to cool off, you're losing water. If you wait until you're thirsty enough to want to drink, it's too late—you're already behind the curve! Did you know just a 2-percent decrease in your total body water will lower your functional IQ? Who can afford to lose intelligence? Heck, if I had 10 more IQ points, I could've been a pilot instead of just a flight surgeon!

So how can you tell if you're adequately hydrated? You've seen the charts that tell you how much to drink for a certain workload in a given environment. Some Soldiers think "more is better"—that as

long as they continue to drink water, they'll be OK. However, each person's metabolic needs may be different, and it's possible to become water intoxicated and die. A good rule of thumb is you should have to hit the latrine every 90 minutes to two hours. And while you're answering "nature's call," check your urine color. It should not be a concentrated yellow color. There's a simple saying you might want to remember—"Peeing white, ready to fight!"

If it's lunchtime and you haven't gone since you got up that morning, you aren't drinking enough. And coffee doesn't count because caffeine, which is also found in sodas, is a diuretic. That means it makes you urinate more than you drink. If you're counting on coffee and sodas to get you by, you're "bouncing checks" as far as hydration goes (you're losing more than you're taking in). So drink water and skip the coffee and sodas.

If you're a Leader, check on your troops. If you think you aren't a Leader, think again. Wherever two or more Soldiers are gathered, somebody is the Leader! Look out for your battle buddy and yourself. Drink water, avoid strenuous work in the heat of the day and acclimatize before stressing your troops.

Take care of your body. After all, where else are you going to live? ■

Editor's note: For a more in-depth discussion of heat injury prevention, see the U.S. Army Center for Health Promotion and Preventive Medicine Web site at <http://chppm-www.apgea.army.mil/heat/>.

Army Medical Surveillance Activity (AMSA) through the Reportable Medical Events System (RMES). These cases must be reported within 48 hours in accordance with Army Regulation 40-5, *Preventive Medicine*, paragraph 2-18d. This reporting requirement includes case reports from subordinate clinics and clinics at satellite locations. Heat injuries at mobilization sites should be reported to the nearest regional military treatment facility (MTF). Preventive medicine personnel at MTFs should receive local reports of possible heat injuries and investigate and report the required information through RMES to AMSA.

As much as we know, and with all the information about heat injury prevention available to all Soldiers, we should be successful at reducing heat injuries during the upcoming hot weather season. Whether at work or play in the summer heat, it's important to reduce the risk of heat stress as much as possible and remain vigilant for signs that all is not well. Remember to use CRM every time in planning for the hot weather ahead. ◀



Back in Sa



the Saddle Again

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Just get back from the sandbox? How about a mid-tour leave? That was what I was doing last summer when I took some time off from the challenges in Afghanistan. While I was home, I got back in the saddle again, enjoying the freedom only a motorcycle provides. During my leave, I covered nearly 900 miles without a scratch, which means you don't have to become a statistic when you come home and ride. Here are some tips to help keep you on your bike and your bike on the road when you get back from the sandbox.

Use Your Head

The most important thing you can do is a good risk assessment. This doesn't necessarily have to be difficult. It's mainly using common sense and good judgment to blunt some of your eagerness to do things that you shouldn't when you first get back. The things I considered in my personal risk assessment included

the condition of my bike, length of my rides and time when I rode. I also considered whether to carry a passenger and where I would ride.

Is Your Bike Ready?

You hated putting your bike into storage before you left. I'm certain you did all the right things like changing the oil, hooking up the battery to a trickle charger and putting stabilizer in the fuel. Now that you have returned, it's time to be just as meticulous about your bike's maintenance before riding it on the road. Check the pressures in your tires because they will have gone down. Check your cables to see if they need adjustment. Ensure

the nuts and bolts that were tight when you left are still tight now.

Dust off your Motorcycle Safety Foundation training and use T-CLOCS—an acronym for tires, controls, lights, oil, chassis and stands—as a guide as you check your bike.



T-CLOCS

T-CLOCS was developed by the Motorcycle Safety Foundation to assist motorcycle drivers in completing pre-ride (or pre-purchase) motorcycle inspections. T-CLOCS is easily memorized and very useful. The individual letters stands for the specific areas to be checked. The T-CLOCS inspection should be conducted at least twice a year to ensure safe riding.

Adapted from Motorcycle Safety Foundation materials
www.msf.usa.org



“When you’re **RIDING** and **ENJOYING THE BREEZE**, it’s sometimes **HARD TO REALIZE** just **HOW HOT** it is.”

Plan a Reasonable Ride

When I first got back, I wanted to take a 13-hour ride from Fayetteville, N.C., to Fort Campbell, Ky. However, that would have been a high-risk trip because of the hot weather, my need for rest, the length of the ride and the unfamiliar terrain. Instead, I took short rides—none of which lasted much longer than an hour—to brush up my skills. To reduce my risks, I began by riding on back country roads, where I would encounter less traffic. Also, I didn’t carry any passengers at first because having a passenger dramatically changes a bike’s handling.

I avoided riding at night because of the reduced visibility and huge bugs that came out and generally made things less than enjoyable. When I did ride after dark, I kept to routes that had bright street lights. The downside to riding mainly during the day, however, was afternoon temperatures that often topped 100 F. As my rides got longer, I needed to make sure I kept myself hydrated. One afternoon, as I was riding back from Myrtle Beach, S.C. (about a 3.5-hour ride), I had to take a 30-minute break to drink some Gatorade® and sit in the shade. When you’re riding and enjoying the breeze, it’s sometimes hard to realize just how hot it is.

No Highway Hash, Please

I also avoided metropolitan Fayetteville at all costs. I’m convinced it’s a high risk for bikers anytime they ride around Fayetteville’s shopping area. The worst thing a biker can see in their rearview mirror is a minivan full of out-of-control kids with a driver talking on a cell phone. There are a lot of vehicles that fit that profile in Fayetteville and other congested urban areas.



Safety—It's an Attitude!

Even though I've been riding for quite a while, I still think of myself as a novice. I keep that attitude because I still want to be riding in my 90s. If you start thinking you're good, you're likely to get cocky and overconfident and turn into an accident waiting to happen. That's why I broke myself in slowly when I first got back, treating every ride as a training session so I could get used to cornering, braking, scanning and positioning in traffic. These are all skills that require constant refinement regardless a rider's experience level.

The Intersection of Safety

When I'm sitting at a red light, before the light turns green, I try to make eye contact with as many drivers as I can. You can never tell what type of effect this has—it's just something I like to do. The key, however, is realizing you'll always come out the loser in a right-of-way confrontation with a car or truck at an intersection, regardless what the traffic

control says. I live near an intersection that has a blinking yellow light for the road I travel and a blinking red light for the crossroad. I normally slow to about 35 mph and clear left and right before entering and assuming right-of-way. When it comes to intersections, I'd rather give way than give blood.

Dress for the Occasion

I wear the required personal protective equipment (PPE) whenever I ride. Most PPE is reactive, being designed to help you survive a crash. However, one piece of PPE that can help prevent a crash is good protective eyewear. While I was home, I bought a fitted pair of Wiley-X® goggles with foam cups designed to keep the wind out of my eyes. They cost way more than I would have ever expected to pay for glasses, but it was worth it to see clearly and keep my eyes from drying out.



“ If you start **THINKING YOU'RE GOOD**, you're likely to get **COCKY** and **OVERCONFIDENT** and turn into an **ACCIDENT WAITING** to **HAPPEN.** ”

You Booze—You Lose!

I saved drinking and riding for last. The bottom line is that I just didn't do it. This is an area of personal responsibility that, despite countless safety briefings, counseling and policy letters, ultimately rests on your shoulders. If you're redeploying from an alcohol-restricted tour, I can understand your desire to imbibe. However, for your sake and that

of your friends, Family and unit, please don't mix bikes and booze.

Riding is a sport that befits a band of brothers. If you're an experienced, safety-conscious rider, mentor a Soldier who is new to the sport. If you're a Leader with Soldiers who ride, show them their safety is your concern. As Soldiers, we are responsible to keep each other safe. As a band of brothers, how can we do less? <<



Stranded in

GREGORY SANCHES

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Fort Wainwright, Alaska

Imagine a Soldier riding his all-terrain vehicle (ATV) into the Alaskan tundra, only to become lost and stranded for days ...

Jim—that's not his real name, but we'll use it for easy reference—had big plans for his fall moose hunt. Jim, who was stationed at Fort Wainwright, Alaska, had contracted a guide to take him hunting. Looking to make the most of their time hunting, the pair decided to ride their ATVs to the jump-off point for the hunt, leave them there and then return in a light plane from a nearby airstrip. When it was time for the hunt, the pair planned to fly back out to the strip and pick up their ATVs and gear.

The day came for Jim and his guide to meet and ride their ATVs to that drop-off point. Jim was confident about the ride—he'd already spent a lot of time camping and hunting in the backcountry. This was a piece of cake—or so he figured—so he didn't bother letting anyone else know where he was going, what trail he was using or when he was due back.

As the pair rode their ATVs down the trail, Jim got ahead of his guide. Instead of waiting for him to catch up, Jim kept pushing on, thinking he could find his own way to the drop-off point. After going some distance, Jim lost the trail, but thought he could still make it by taking off across the tundra and heading toward

Iowa Ridge. However, he didn't have a map or compass and he didn't have his portable global positioning system (GPS) equipment with him. Beyond that, he was not familiar with the terrain he was now in.

As he rode, Jim's heavily loaded ATV began to overheat, ultimately shorting out the electrical system. Fortunately for Jim, he was able to pull start the engine once it had cooled down. However, Jim was lost and, as night fell, he decided to camp next to his machine, fighting off the chilly temperatures by staying warm in his sleeping bag.

The next day, Jim headed out again across the tundra. As he rode through the rugged terrain, the ATV tipped onto its side. Try as he might, Jim could not get it back onto its wheels. Stranded, he spent his second night in the wilderness, camped out beneath a tarp next to his machine. The next day brought rain, wind and temperatures that dropped into the 40s as Jim hunkered down beneath the tarp. And, to make things worse, he was almost out of gas. Even if he could get the machine back onto its wheels and running, he didn't have enough gas

to get to somewhere he'd be safe. The only good news was Jim had his cell phone and could keep his family apprised of the situation.

Jim spent a second night under the tarp next to his stranded ATV. The next day, his family decided to



the Tundra

call the Alaska State Troopers and tell them Jim was stranded and provide a general idea of where he was. The troopers launched a helicopter and, after a couple of hours, found Jim. Unable to land because of the rugged terrain, the troopers contacted medical evacuation personnel at Fort Wainwright, who successfully got to Jim. They were able to rescue him and bring him back home, but his ATV had to be left where it was—out in the tundra. Not exactly the way Jim had envisioned things going.

As bad as things went, Jim was lucky. Things could have turned out far worse than just being in hot water with his family for screwing up his

backcountry trip. With the benefit of hindsight, it's easy to see his trip was an accident waiting to happen. Instead of applying composite risk management (CRM) to plan for any potential problems, he assumed too

and leave a detailed map with them. Establish certain checkpoints along your route and, when you reach them, contact that responsible person. That way, should something happen, it will be a lot

“No one **PLANS** on **GETTING LOST**, but once you are, **YOU'LL HAVE TO SURVIVE** on what you **BROUGHT** with you.”

much of his own skills. He substituted PPPP (pitifully poor prior planning) for CRM and got the unpleasant results.

So let's take a minute to use a little CRM to see how an ATV trip into the backcountry could have been better planned.

First, don't get cocky because you've done something in the past and assume you can take shortcuts. You're not God—you don't know everything that could happen. Because of that, check your survival equipment to make sure you're carrying everything you'd need to survive should you become lost or stranded. No one plans on getting lost or stranded, but once you are, you'll have to survive on what you brought with you.

Second, always tell someone responsible where you're going

and leave a detailed map with them.

Third, never travel alone in the backcountry. Even if your guide is moving slower than you want to, stay with him. Guides know where they're going—you may only “think” you know. This is especially true when traveling through unfamiliar terrain. Also, common sense dictates taking a map, a compass and, if you have one available, a GPS so you can keep track of your position.

Finally, remember the backcountry can be very unforgiving of mistakes, and man is not the top of the food chain. Before you go out, make sure you've got a good plan to come back.◀

Editor's Note: This story was adapted from one published in Wolf Bites, a safety newsletter Mr. Sanches publishes for the benefit of the Soldiers in his unit.



Bridging the Gap

CHRIS FRAZIER
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In an effort to turn the tactical vehicle accident arrow downward, the Army is offering several driver's training programs for Soldiers.

Operating or riding in Army vehicles was the No. 1 fatality-producing accident for Soldiers while on duty in fiscal 2007. In the majority of these accidents, recurring trends such as excessive speed for the conditions, overcorrecting, inadequate training and overconfidence emerged as key causal factors.

In some cases, units are developing controls, but failing to implement them and provide adequate supervision, said Lt. Col. Randall Cheeseborough, U.S. Army Combat Readiness/Safety Center Ground Task Force chief. Hoping to reverse the accident trend, many units are sending Soldiers to training courses at Camp Buehring, Kuwait, to polish their driving skills before moving forward to Operation Iraqi

Freedom or Operation Enduring Freedom.

Officials have already received positive feedback from Soldiers on the Up-Armored HMMWV Training Course, Cheeseborough said. The 10-kilometer course covers many of the skills Soldiers will need when driving a tactical vehicle, including collision avoidance, steering, braking, off-road recovery, side-hill obstacles and restricted-lane driving.

Another potentially life-saving device being used at Camp Buehring is the HMMWV Egress Assistance Trainer (HEAT). Currently, there are four HEAT devices available for

Soldier use.

The HEAT gives Soldiers a more realistic way to practice rollover drills and consists of a HMMWV cab mounted to a tank engine maintenance stand. Using an electric motor, the HEAT simulates a rollover by rotating the device up to 360 degrees in either direction and stopping it in various positions, allowing Soldiers to rehearse a variety of egress techniques at different angles.



Through this training, Soldiers learn to react quickly and instinctively to an actual rollover and have confidence in their safety restraints and equipment. The HEAT also teaches Soldiers the importance of crew coordination, said John Hutchinson, safety director, Area Support Group-Kuwait.

"Everybody in the vehicle has to work in concert," Hutchinson said. "In an accident scenario, they all have responsibilities — from calling

'rollover' to pulling the gunner down and holding him so he doesn't fall out. They must work together as a crew."

Another initiative that allows Soldiers to train on four M1114 simulators was launched by ASG-Kuwait in mid-November, Cheeseborough said. A patrol simulator will be available for drivers of Heavy Equipment Transports, M916s, tractor-trailers, Heavy Expanded Mobility Tactical Trucks or any other vehicle that carries cargo.

Cheeseborough said all the training courses are valuable tools that will increase Soldier survivability. He hopes units will continue to send their Soldiers to the courses so they can develop the necessary skills to safely navigate the roadways.

"Driver's training is still a major issue with some units," Cheeseborough said. "We need to get the word out to the rest of the Army that there are some great programs out there." <<



For more information on driver's training courses, visit the Driver's Training Toolbox at <https://cra.army.mil/drivertrainingtoolbox/>.



OH-58D Kiowa Warrior

CHIEF WARRANT OFFICER 5 DANIEL R. HAUF
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Engine overspeed incidents are increasing in OH-58D units. These overspeeds are a result of both deliberate full authority digital electronic control (FADEC) manual throttle training and routine flight procedures.

Some of the overspeeds experienced during training of FADEC manual throttle operations (Task 1102) are attributed to the instructor pilot's (IP) failure to recognize the situation in a timely manner and apply the

appropriate recovery procedure. The delay can be attributed to the lack of information or feedback from standard cockpit instruments because the IP's attention is focused elsewhere. An example of this would

be the IP's attention being focused outside the cockpit during a critical phase of flight, such as during short final and approach. By the time the IP recognizes the situation and applies the proper corrective action, it is

too late to prevent the overspeed. This is the classic "IP late with corrective action."

Experience is a major factor when conducting manual throttle operations. Experienced IPs know where to get their sensory cues. In the case of manual throttle, it's keeping a hand on the throttle/collective and detecting even the slightest input change made by the pilot. This gives the IP more control over the situation so he can immediately stop

throttle movement if he senses it going in the wrong direction.

Other instances can be attributed to the IP exceeding his personal abilities and limitations. This is sometimes referred to as "pushing the envelope." This is a normal process and applies to nearly everything we do as humans. We want to determine our comfort level by seeing just how far we can get into a situation and still be able to recover from it. Fortunately, we have clearly

defined standards in the aircrew training manual (ATM) and it is imperative new IPs understand the ramifications of

the downwind leg of the traffic pattern has fewer consequences than allowing the pilot to exceed the 95- to 105-percent N_R (main

“ **EXPERIENCED** IPs **KNOW** where **TO GET** their **SENSORY CUES.** ”

exceeding those standards. Being slow to correct the pilot exceeding the plus or minus 100-foot altitude standard in

rotor speed) limitations set forth for manual throttle operations. In this case, the IP must perform corrective action immediately

Trends



to avoid exceeding aircraft limitations.

Failing to properly execute a recovery procedure is another cause of overspeeds. For example, the IP executes underspeed recovery at altitude, but fails to place FADEC back into AUTO before advancing the throttle. The IP may have been so focused on flying and recovering the aircraft that he either forgot to press the AUTO/MANUAL switch or pressed it but failed to verify it was switched to AUTO before advancing the

throttle. In one instance, repeated pressing of the switch failed to place the FADEC back into AUTO (switch failure).

Loss of situational awareness is also a culprit during training of manual throttle. The IP placed the AUTO/MANUAL switch to MANUAL while the aircraft was on the ground at flat pitch, 100 percent N_R . The ATM clearly states the FADEC switch will not be placed in MANUAL while the aircraft is on the ground unless the collective is full down

and the throttle is at idle. Manual throttle operations demand a very high degree of attentiveness on the IP's part, and a sterile cockpit is a must. Eliminate any extraneous conversation (including any unnecessary external radio traffic) that does not pertain to the task. Any distractions that prevent the IP from focusing his full attention the task at hand must be eliminated. Compartmentalization is defined as "the





“ The IP must ENFORCE established STANDARDS and ENSURE their MIND IS CLEAR and that they are READY TO PERFORM whenever they CLIMB INTO THE COCKPIT. ”

ability of a pilot to block out all personal problems when he closes the canopy.” This works well with some crewmembers, but not with others. It is imperative that mission briefers identify those pilots who historically carry their personal problems with them into the cockpit and adjust accordingly, especially if the individual is an IP.

Overspeed incidents are not limited only to the conduct of manual throttle training. Several overspeeds were attributed to a combination of aircrews deviating from established checklist procedures along

with a breakdown in aircrew coordination. On engine runup, instead of waiting for the generator load to decrease to the acceptable level before conducting the FADEC check (at idle), crews elected to bypass and proceed through the checklist. When they decided it was time to go back and conduct the check, they did so but at 100 percent N_R , which resulted in an engine overspeed. The high price paid for the 15 to 30 seconds of time saved on the runup was a new engine and lengthy downtime.

Training, discipline and standing operating

procedures are the foundation of continuous combat effectiveness. Commanders must ensure their aircrews are given the time and opportunity to train those critical tasks. Mission briefers must be trained and qualified in identifying risk factors and reducing the risks associated with the specific tasks an aircrew will be performing.

The IPs must enforce established standards and ensure their minds are clear and that they are ready to perform whenever they climb into the cockpit. The Global War on Terrorism places a high level of tactical risk upon our aircrews and aircraft. Anything aircrews can do to reduce the accident risk greatly increases our leading edge on the battlefield. ◀

150 POUNDS OF KNUCKLEHEAD

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Like every red-blooded American teenage boy back in the 1960s (and since), I “lusted” for the fastest, coolest-looking street machines. Most of the time, I only got to look. But then, there was one memorable time ...

My buddies and I envied Tony. A couple of years older than the rest of us, he'd joined the service and scraped together enough money to buy an Austin Healey 3000 sports car. No puny four-banger under the hood like on other English sports cars. This baby had an overhead-cam, 3.8-liter, six-cylinder racing engine that would unleash a whole herd of ponies when you stomped on the gas. It was the envy of the rest of us teenage guys who were lucky if we didn't have to pedal our transportation. It was also a great “chick magnet”—an observation not lost on the rest of us guys.

In addition to having a hot sports car, Tony also had an “interesting” sense of humor. He'd offer each of us a chance to go for a “performance demonstration” ride in his car. You know, “fun stuff”—like seeing if the 3000 really would do the advertised 140 mph. Of course, we all bit.

Finally, I got my shot. It

was a Saturday night and we had the speedometer needle bent well past the posted speed limit. It was great—I had never gone so fast in my whole life! I thought it couldn't get any better than this when, suddenly, Tony nudged me. When I looked over, he jerked the steering wheel off the column and handed it to me. With a big grin, he said, “Here, Bob, you drive!”

It was a “come-to-Jesus” moment for me. My heart stopped as all 17 years of my brief life flashed before my eyes. I could see the next day's front page story, “Police scrape two badly mangled bodies off the interstate—coroner using dental records to identify remains.”

I sat there for what seemed like a lifetime, holding what had been the vehicle's primary means of direction. As I wondered what my mother would say at my funeral, Tony reached under his seat, grabbed a pair of vice grips and latched them onto the



steering column. At least we had some semblance of steering again. From the grin on his face, it was clear he took great delight in my stark terror.

Luckily—if luck can be thought to have played a part in this—the car didn't go out of control, nor did we have to dodge anything. I found out later I was just one of a long list of Tony's victims. All the previous initiates had been

sworn to secrecy so the next unwary passenger could experience the full horror of it all.

For a few seconds of amusement, Tony could have killed us both—which leads us to the moral of this story. Just how much are you willing to risk for a thrill, to amuse a friend or to show off behind the wheel? Yes, of course, YOU know you're a better-than-average driver—but what if something unexpected happens? Could you live with the consequences? Could your passengers? How would you feel watching one of your buddies being buried while their parents grieve at the funeral?

I've heard a reckless driver referred to as a "loose nut behind the wheel"—but that wouldn't quite work here. You see, the problem wasn't a missing piece of steel—it was 150 pounds of knucklehead planted in the driver's seat! Have you ever gotten into a car and then asked yourself, "Am I really sure I want to ride with this driver?"

The following examples taken from the U.S. Army Combat Readiness/Safety Center's preliminary loss reports (PLRs) show that might be a good question to ask:

- A Soldier in a sports car driven by a civilian died when the driver lost control, veered off the road, struck a power pole and tree and then overturned. The Soldier was pronounced dead at the scene. Both occupants were wearing seat belts.
- A Soldier was riding in a vehicle when the driver, an intoxicated Soldier, lost control, went off the road and struck a tree. While the driver survived, the Soldier riding as a passenger was killed.
- Two Soldiers and a civilian were riding in a car driven by another Soldier when the car suddenly left the road and rolled over several times. One of the Soldiers wasn't wearing his seat belt and was partially ejected and killed. The other passengers survived but suffered injuries. The driver, who had been drinking and operating the vehicle at a high rate of speed, survived the crash uninjured.

In two of the three reports above, the reckless driver survived, but the passenger did not. In both cases, the PLR noted the deceased Soldiers chose to ride with drivers that clearly weren't safe. Instead of refusing to get into the car or trying to stop their buddy from driving, they went along for the ride—and it was their last. Life didn't offer them a "do-over." If you're faced with a similar decision, what will you choose? <<



KNOW THE LIMITS

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As sport utility vehicles, pickup trucks and vans continue to grow in popularity with motorists, so do fatal accidents involving these types of vehicles. However, a little common sense and knowledge about the handling characteristics of your vehicle can help keep you safe when you're behind the wheel.

In fiscal 2007, the Army experienced 33 fatalities in SUVs, pickup trucks, vans and all-terrain vehicles. Of these, 14 victims were not wearing seat belts, and 13 of the accidents involved a rollover. Ten of these fatal accidents involved speed, and 17

involved loss of control. When you run the numbers, 42 percent of the fatalities were not belted in, 52 percent lost control of the vehicle and 39 percent of these accidents involved a rollover. Thirty percent of the SUV and pickup fatalities were speed related.

The Army has seen an overall increase in the number of SUVs and pickups Soldiers are buying, which is one of the contributing factors to the increase in fatalities for fiscal 2007. Inexperience with the handling and driving characteristics of these type vehicles is another.

To date in fiscal 2008, the Army has had three accidents

in SUVs involving four fatalities—two drivers and two passengers. Two of these accidents involved rollovers that resulted in three fatalities; two passengers that were not belted in were ejected from a vehicle during the rollover and a driver that was wearing a seat belt had to be extracted from a vehicle.

All vehicles have unique driving and handling characteristics and must be driven accordingly. For example, driving a sports car is very different from driving an SUV. Even though that might sound obvious, many people don't realize it's true—especially new drivers. Passenger cars

and SUVs are created and engineered for different purposes, and those differences should be acknowledged and respected. So, here are a few tips to help keep SUV drivers safe and allow them to enjoy their vehicles even more:

- The handling and maneuverability of SUVs is different from that of a car. There is a warning about this on the driver-side sun visor. Drivers should familiarize themselves with their SUV's braking, steering and overall handling performance by practicing in an empty parking lot.

- Avoid sudden or sharp steering changes. SUVs have higher centers of gravity so they



can go off-road; however, this higher center of gravity also makes it easier for SUVs to roll over. Allow more room to execute a passing maneuver and try not to pass in a curve since these bigger vehicles are taxed more in a curve.

When purchasing an SUV, seriously consider opting for Electronic Stability Control (ESC). Credible fleet and other studies found ESC to be very effective in preventing rollovers and other out-of-control situations.

■ Always wear a seat belt. Government crash data show that lower seat belt use, speeding and alcohol use are common factors in more

awareness is important to avoiding problems.

■ Slow down, since most people (not just SUV drivers) drive too fast. Driving slower and more defensively allows more time to react in an emergency situation. It's also less stressful.

■ An SUV handles differently depending on how it's loaded. Don't carry too much weight, because overloaded vehicles are more likely to roll over. Cargo and extra passengers further raise the center of gravity. Slow down even more when the vehicle is heavily loaded.

■ Know whether the SUV has antilock brakes (most new SUVs do). If so,

four-wheel drive, which provides more traction in mud, snow, ice or rain. That's a key reason many people buy SUVs. However, just because a vehicle can maneuver better in inclement weather doesn't mean it will stop quicker than a passenger car. In fact, the larger and heavier the SUV, the more distance it will take to stop. Drivers of SUVs should adjust the speed and distance accordingly between their vehicle and the vehicle in front of them.

■ Because SUV drivers sit higher than other motorists and have a better view ahead, they may tend to follow other vehicles more closely. Again, heavier vehicles like SUVs need more room to stop than cars.

■ Consider other drivers. While SUV drivers can see farther ahead, those beside or behind them cannot. And because they can't see through the SUV driver's

"road warrior" mentality. A bigger vehicle can give some drivers false confidence that they're protected by sheer size or by four-wheel-drive traction. Overconfidence in a vehicle's abilities can lead to serious consequences and a bad image for SUV owners.

■ Vans, SUVs and pickup trucks, because of their larger size, have a "blind spot" within a few feet of the rear of the vehicle. For this reason, it is important to always check around the vehicle for small children or obstacles that drivers might not otherwise see from behind the wheel before they leave. Also, drivers should always turn their heads and look before changing lanes; don't rely solely on mirrors.

It's likely SUVs, pickups and vans will remain a force on the nation's highways. For those drivers who prefer to hit the open road in one of these vehicles, take the time to learn about its handling, be considerate of other motorists and, above all, buckle up! ■

Information for this article was gathered from the SUV Owners of America, the Insurance Institute for Highway Safety, the National Highway Traffic Safety Administration and the U.S. Army Combat Readiness/Safety Center.

“ Passenger **CARS** and **SUVs** are **CREATED** and **ENGINEERED** for **DIFFERENT** purposes, and **THOSE** differences **SHOULD** be **ACKNOWLEDGED** and **RESPECTED.** ”

than 90 percent of all rollover fatalities. Also, 72 percent of those killed in rollover crashes were not wearing seat belts. Drivers of SUVs and their passengers should take extra care to buckle up.

■ Learn to check the rear- and side-view mirrors frequently. Constant situational

when making a quick stop, drivers should stomp on the brake pedal, stay on it with firm pressure (don't pump them like in an older vehicle) and steer the vehicle where they want it to go.

■ Many SUVs have



windshield, they have less warning when that SUV is going to stop. Be aware of all the vehicles in traffic and be courteous.

■ Avoid developing a



LOST

AVIATION

OH-58



CLASS A

D(R) Model

■ The aircraft experienced a low rotor condition during main rotor RPM auto-rotational check and impacted the runway. The maintenance test pilot and maintenance technician suffered recoverable back injuries. The aircraft was destroyed.

CLASS C

■ The aircraft exceeded engine power turbine speed

(NP) limitations (114 percent for 16 seconds) during a full authority digital electronic control manual/rotor RPM warning maintenance check.

UH-60



CLASS A

L Model

■ The aircraft main rotor blade contacted the Persistent Threat Detection System (PTDS) aerostat cable during departure from a forward operating base. The PTDS was recovered with damage. The aircraft revealed tip cap damage to one main rotor blade.

CLASS C

■ The aircraft window jettisoned during flight and struck the tail rotor. The window was later recovered.

CLASS C

■ Post maintenance test flight inspection revealed damage to one main rotor blade. The blade deice cable was not connected and was associated with the damage.

FOLLOWING PROPER PROCEDURES MAY HAVE PREVENTED THIS COSTLY INCIDENT. AN OLD SAYING REVISITED: "HASTE MAKES WASTE."

UAS

MQ-5A



CLASS A

■ The aerial vehicle operator (AVO) lost signal during flight and the system crashed.

RQ-7B



CLASS C

■ The tactical UAS failed to respond to ground control station commands during landing and incurred damage upon contact. The system was recovered.

RQ-11



CLASS C

■ The AVO lost global positioning system link and operational control of the system shortly after launch. The system could not be located.

GROUND

ACV



CLASS A

■ A Soldier suffered a permanent total disability when the M1117 he was driving became airborne after cresting a hill and touched down hard, nose first. The Soldier was participating in driver familiarization training at the time of the accident and was wearing a seat belt.

CLASS B

■ Two Bradley Cavalry Fighting Vehicles were damaged when they collided during night vision driver

training. Ten Soldiers aboard the vehicles suffered minor injuries.

AMV



CLASS A

■ Two Soldiers were killed and two others were injured when the M1025 they were riding in was struck from behind by an 18-wheeler traveling at a high rate of speed. The 18-wheeler pushed the M1025 off the roadway, causing it to overturn.

CLASS B

■ Two Soldiers were injured when their M977 Heavy Expanded Mobility Tactical Truck lost its braking capabilities and ran off a roadway. A ratchet strap was believed to have damaged the air supply hose to the brakes after it fell through a hole or gap in the truck bed and wrapped around the driveshaft.

■ A Soldier suffered a permanent partial disability injury when he was struck by a HMMWV. The Soldier was attempting to ground guide the vehicle when the driver lost sight of him.

Personnel Injury



CLASS A

■ A Soldier was killed and another was injured in an explosion. The Soldiers were collecting the remains of a TCN JP8 tanker that had burned earlier, when it exploded. The circular end cap of the tanker blew off, striking one Soldier in the head and killing him. The other Soldier suffered burns and cuts.

ARMY AIRCRAFT LOSSES

Fiscal 2002 to Present
through January 15, 2008



AH-64A/D	11/50
U/MH-60A/L	8/27
C/MH-47	7/16
OH-58D	11/25

TOTAL 37/118

ARMY GROUND LOSSES

Fiscal 2008
through January 15, 2008



AMV	7/7
ACV	2/0
PERSONNEL INJURY <small>includes weapons handling accidents</small>	14/13
FIRE/EXPLOSION	3/3
PROPERTY DAMAGE	1/0

TOTAL 27/23

■ A Soldier was killed when he was struck in the chest by a round from another Soldier's M9 pistol. The Soldiers were clearing their weapons at the time of the accident.

DO YOUR SOLDIERS PRACTICE PROPER WEAPONS CLEARING PROCEDURES, INCLUDING MUZZLE AWARENESS?

■ A Soldier died from the second- and third-degree burns he suffered after his tent caught fire. It is suspected that an unknown component of the electrical system within the tent either overheated or came loose, causing a spark to ignite combustible material.

■ A Soldier died after collapsing during organized physical training.

■ A local national civilian was fatally injured when he was struck by a round that traveled beyond a firing range where a unit was conducting live-fire training.

CLASS B

■ A Soldier's left ring finger was amputated when he slipped while trying to dismount an RG-31 Mine Resistant Ambush Protected vehicle after performing preventive maintenance checks and services. The Soldier was wearing a ring and was not wearing gloves at the time of the accident.

DO YOUR SOLDIERS REMOVE WATCHES, RINGS AND OTHER JEWELRY WHEN THEY'RE CONDUCTING PMCS?

■ A Soldier's finger was amputated while he was attempting to adjust the forks on a forklift.

DRIVING

POV



CLASS A

■ A Soldier was driving a vehicle with his wife, also a Soldier, and their child riding as passengers when he collided head on with a local national vehicle going the wrong way. Both Soldiers were fatally injured.

■ A Soldier was driving his sedan when he struck a utility pole. The Soldier, who was not wearing his seat belt, was ejected from the vehicle and died from his injuries.

■ A Soldier was driving his sedan when it left the roadway, struck a drainage ditch and overturned several times. The Soldier, who was speeding, unbelted and intoxicated, was ejected from the vehicle and suffer fatal injuries.

DO YOUR SOLDIERS UNDERSTAND THAT MIXING SPEED, ALCOHOL AND THE FAILURE TO WEAR SEAT BELTS COCKTAILS A DEADLY "COCKTAIL"?

■ A Soldier was driving his vehicle in snow and ice on an interstate when he was involved in a 30-vehicle collision and killed.

■ A Soldier was riding as a passenger with her husband in their minivan when they were involved in a multi-vehicle collision on an icy road. The Soldier was fatally injured.

HAVE YOU EXPLAINED TO YOUR SOLDIERS THE DANGERS OF WINTER DRIVING?

POV DRIVING LOSSES

Fiscal 2008

Class A accidents/Soldiers killed

CARS	17/17
SUV/JEeps	5/6
TRUCKS	2/2
MOTORCYCLES	15/15
OTHER*	2/2

TOTAL DEATHS

37 37

DON'T PUSH YOUR LUCK



CLASS A

■ A Soldier was fatally injured when he was ejected from his pickup after it left the roadway and overturned several times upon entering a ditch. The Soldier was not wearing his seat belt.

■ A Soldier on post-deployment leave was driving his sport utility vehicle (SUV) when a large pickup crossed the center divider and hit the Soldier's vehicle head on, instantly killing him.

■ A Soldier was driving his vehicle when he struck a moose that had entered the roadway. The Soldier died four days later from his injuries.

POM



CLASS A

■ A Soldier was approaching an intersection and slowing to allow another vehicle to turn when he was struck from

behind by a pickup truck. The Soldier died three days later. The Soldier was wearing a helmet but had not attended Motorcycle Safety Foundation training.

■ A Soldier was operating his motorcycle when he hit a curb, struck a light pole and then was ejected from his bike. He was transported to a local hospital, where he later died.

CLASS B

■ A cadet was on leave and operating his newly purchased POM. He reportedly attempted to pass vehicles negotiating a left turn at an intersection and collided with the side of a POV, resulting in permanent partial disability injuries.

ATV



CLASS A

■ A Soldier was on leave when he suffered fatal injuries while operating an all-terrain vehicle that reportedly left the roadway and struck the rear end of a parked tractor-trailer.

Personnel Injury

CLASS A

■ A Soldier had stopped his vehicle along the road to assist motorists who had been involved in a crash when an SUV slid on the icy roadway and struck and killed the Soldier.

Spring has Sprung

and
Motorcycle Safety Awareness
Month is on the Horizon

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IS ARMY STRONG



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